Chronic Pain Management Case Study:

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Abstract

This case study examines psychological issues associated with Amy, a 30-year-old female with chronic back pain who has been referred by her GP for psychotherapy. Amy was involved in an mva 2 years ago, has undergone two operations to repair damage to her spine, and continues to experience chronic pain. Amy states pain controls her life and feels limited in her ability to engage in social and physical activities, has sleep problems, and relies on her medication. Her relationship with her husband has deteriorated, is unable to return to work, is withdrawn, and feels unattractive and hopeless about the future. Her daughter undertakes many of the domestic tasks. Amy meets the criteria of a depressive episode. Chronic pain is viewed in the context of the biopsychosocial model and, specifically in relations to contributing psychological factors of cognition, behaviour and affect. Amy’s rehabilitation and treatment plan focuses concurrently on the helping model for rapport and trust building, a cognitive-behavioural approach for pain management and rehabilitation, and depressive symptoms which includes a strong relaxation approach, and structural family therapy for Amy’s marital and family problems. The benefits, limitations, and challenges for the therapist are discussed. Risks for successful treatment include areas of low levels of therapist’s clinical therapeutic skills, training, experience, and treatment efficacy.
Chronic Pain Case Study

Introduction

The presenting problems for Amy, a married 30-year-old female with a daughter, referred by her general practitioner (GP) indicate psychological, social and somatic issues after receiving serious lower back injury from a motor vehicle accident (mva) that required two corrective surgical procedures. These presenting problems are firstly described and a case formulation follows. The multidimensional biopsychosocial model of chronic pain described by Turk and Monarch (2003) is introduced. The genesis of Amy’s chronic pain related problems are discussed in terms of the contribution of psychological factors that includes behavioural, cognitive and affective influences. Finally the treatment approaches are identified and described.

Presenting problems

A history of the presenting problem obtained from information provided by Amy in the initial interview reveal that the mva where she was injured occurred about two years ago. Amy was not at fault, and the other driver had been charged with negligent driving and driving whilst drug affected. Significant injuries to her spine and neck resulted, and she is now under the care of an orthopedic surgeon. Although she has had two surgical procedures to repair damage to her spine, she continues to experience chronic pain. Amy feels that pain controls her life, particularly by limiting her social and physical activities, she has problems sleeping and is reliant upon pain relief medication. Amy did work, however since the accident has been unable to return to work as she is unable to stand for long periods. Amy stated that she has no other training or skills.

Amy reported that her relationship with her husband was deteriorating, and feels unattractive having gained weight due to inactivity. Amy describes a strong and supportive relationship with her daughter who is taking on more and more responsibility in running the
house. Amy stated that she feels hopeless about the future. It was noted that Amy meets the criteria for moderate to severe depression.

An examination of the protective and precipitating factors for example would precede a case formulation but this has been excluded for brevity reasons.

*Formulation*

Amy, a married 30-year-old female with chronic back pain caused by a mva two years ago and exacerbated by two subsequent surgical events presents with loss of control, withdrawal, relationship deterioration, increased weight, reliance on pain medication, and hopelessness about future. Reported symptoms indicate moderate to severe depression.

*The biopsychosocial model*

The biopsychosocial model proposes that dynamic and reciprocal interactions among biological, psychological, and sociocultural variables influence the experience of pain (Turk & Monarch, 2003). This model’s view is that the pain experience begins when physiological changes produce nociceptive sensations. Nociception is limited to a sensory event and precedes the perception of pain (Turk & Monarch, 2003). Whereas pain is defined as, the unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage (Merskey & Bogduk, 1986). Generally pain follows nociception however non-sensory perceptual and interpretative processes such as cognition and emotion can modulate the perception and associated pain experience (Turk & Monarch, 2003). The integrative biopsychosocial model holds that it is the appraisal of pain as a psychological and mental process, and environmental circumstances that influences a person’s response. This model explains the great variety in pain responses across individuals.
Cognitive-behavioural concepts are included in understanding chronic pain and it is the assumption that both environment and behaviour are implicated in pain, and an individual’s maladaptive thoughts, feelings, and behaviours shape their pain response. Thus, it is the individual that is the agent of change in their pain experience.

The biomedical factors in this perspective that have been implicated in the initial pain incident or event, for example the mva and later surgical procedures for Amy, and this pain would play a diminishing role in her disability over time. Secondary problems such as physical deconditioning due to inactivity may exacerbate and maintain the problem. This may lead to a cognitive-attentional focus on body and pain, and increase the likelihood of overemphasising and misinterpreting symptoms, and the perception of being disable (Turk & Monarch, 2003). Understanding how these factors contribute to Amy’s problems is introduced as a means to inform the treatment plan development.

Contribution of psychological factors

Behavioural influences on pain

Amy’s reported pain behaviours may be positively reinforced and maintained by escape from noxious (pain) stimulation through the use of drugs, rest, or avoidance or withdrawal of undesirable activities such as her work.

It was reported the Amy relies on her medications. It is generally acknowledged that GPs may reinforce pain and pain behaviours by their responses (Turk & Monarch, 2003). GPs who prescribe medication when they observe pain behaviours may contribute to the occurrence of future pain behaviours. When medication is prescribed to a client on a ‘taken as needed’ basis, the client pays even more attention and may become preoccupied with an anticipated outcome as a result of medication frequency. The alternative is for the GP to prescribe on a time-contingent
basis that is not dependent on the level of pain. The levels of reliance will need to be determined in therapy and consultation by the therapist with her referring GP may be needed.

Classical conditioning of pain may be apparent for Amy. That is, it has been found that over time, fear of pain may become associated with an increasing number of situations and behaviours. It is not uncommon for the pain sufferer to avoid many neutral or pleasurable activities for fear or the potential to cause increased pain [whether realistic or not] (Turk & Monarch, 2003). This may be apparent as Amy indicates that the pain is limiting her activities.

There is also a possibility that Amy may have modelled her pain behaviours from others, perhaps as a child. These behaviours may be appropriate or inappropriate. Hence this aspect may also need to be considered in therapy.

_Cognitive influences on Pain_

Pain sufferers’ beliefs and experiences about their situation, their coping resources and themselves strongly influences how they experience pain, disability, and response to treatment (Flor & Turk, 1985).

Beliefs about the meaning of pain and ability to function despite discomfort can make marked differences to people’s lives. For example, a cognitive representation that a person is in a serious way with pain and injury, is unable to function fully, such as work and engage others, and that pain is an acceptable excuse for neglecting responsibility will likely result in maladaptive responses (Turk & Okifuji, 2002). Generalisation of pain stimuli may result in the client avoiding many activities. Catastrophic thinking is also apparent with pain sufferers. This is around experiencing negative thoughts about the situation they find themselves in and interpreting even minor problems as major catastrophes. In a prospective study by Burton,
Tillotson, Main, and Hollis, (1995) catastrophising was the most salient predictor of back pain chronicity. Clients who respond to treatment show reduced catastrophising thoughts.

According to Turk and Monarch (2003) people with pain that is attributed to a traumatic injury, such as a mva, experience greater fear in association with the pain. They also attributed higher levels of emotional distress, more life interference, and higher levels of pain than people who indicated that their pain was the result of an unknown cause. The attribution of pain and associated symptoms to a physical trauma and the related catastrophic thinking about pain and injury seem to add additional burden and to heighten chronic pain sufferers’ problems (Turk & Monarch, 2003). It would be important with Amy to acknowledge her feelings and her preoccupation with the accident and recognise that her husband would have cognitively processed the mva experience in a very different way. This also will be an important focus in structured family therapy with Amy and her husband.

Self-efficacy, which is the conviction that a person has the resources to be able to effect change and produce a desired outcome (Bandura, 1997 cited in Passer, 2004), is a major mediator in being able to overcome adversity and pain and achieve goals. In therapy it would be important to offer to Amy the chance to focus on her self-efficacy determinants of performance experiences, observational learning, verbal persuasion and, emotional arousal. This approach would seek to being about change, and established and maintain goal-based thinking. Importantly, high self-efficacy would drive Amy’s motivation and determination to create a shift or change around her current feelings and pain behaviours.

*Affective influences in pain*

The affective components of pain are typically negative hence the reason why depression, anxiety, and anger have received the greatest amount of attention in chronic pain studies (Turk &
Monarch, 2003). It is estimated that 40-50% of chronic pain sufferers have comorbid depressive symptoms. But why is it not 100%? Two factors have been found to contribute to this, client’s appraisals of the effects of pain on their lives, and appraisals on their ability to exert control over their pain and lives (Turk & Monarch, 2003). Anxiety and avoidance behaviour is also commonplace in chronic pain. People learn that avoidance of situations and activities in which they have experienced acute episodes of pain will reduce the chance of re-experiencing actual pain and/or perhaps the thoughts associated with being in pain in a helpless and hopeless situation. Thus, being helpless may become the dominant thought that drives avoidance and anxious behaviours. In fact the fear of the possibility of doing an injury may in itself drive avoidant behaviour. Negative mood is likely to affect treatment motivation and adherence to treatment recommendations.

**Psychological assessment and enquiry strategy**

During assessment of Amy’s functioning the therapist may focus on learning all factors that exacerbate and ameliorate the pain experience. Due to brevity the components of this assessment are excluded.

An enquiry strategy using valid psychometric tests would also be undertaken to establish the level and extent of depression and anxiety. This information and the theoretical inquiry presented would allow Amy’s case reformulation to be undertaken.

**Treatment and plan**

*Rapport building – The helping model*

A major psychological aspect of the Amy’s treatment plan includes firstly, developing the therapeutic relationship and establishing a respectful and client-empowered situation (Egan, 2002). Treatment goals would include; helping Amy manage her problems in living more
effectively, and develop unused resources and missed opportunity more fully, and helping Amy become better at helping herself in her everyday life (Egan, 2002). This initial engagement process is important as the effectiveness of any further therapy remains dependent on the strength of trust and respect between Amy and the therapist. A principle of this approach includes beginning therapy from the experience of the client and allowing the client to gain confidence in the therapist through a non-judgmental and empathic approach to discourse. The efficacy of the helping model has been examined over many years in outcome studies, client questionnaires including consumer reports and, particularly meta-analytic reviews of helping outcomes which shows that, helping does help (Egan, 2002).

Cognitive-behavioural approach

The tenets of this approach are a focus on pain management and modifying the sensory, affective, cognitive, and behavioural aspects of Amy’s experience while providing techniques to help gain a sense of control over pain effects on her life. It would be important to inform Amy’s that studies show that people are capable of more than what they expect to achieve from therapy such as reduce fears and avoidance of activities, and increase sense of pleasure and mastery (Turk & Monarch, 2003).

Cognitive restructuring of the automatic negative thoughts that Amy has around the pain experience is designed to help identify and modify maladaptive thoughts. To help in this process, some behavioural techniques would be used. This may include monitoring the context in which her pain is elevated and score this on an agreed scale, how her level of emotional and physiological arousal is affected, and thoughts she has at the time and how they impact emotions, behaviours, and the pain experience. This process may help Amy to begin to share her pain experience with important others. The maladaptive thoughts once identified are then examined in
therapy to see how they might contribute to distress. A particular focus here would be around
here feelings of loss of control and helplessness. From this work Amy would be encouraged to
develop evidence-based or adaptive thoughts (e.g. ‘Although I feel pain, my body is not being
harmed’, or ‘While pain seems always present, there are many things that I enjoy doing’). This
would be extended into out-of-clinic exercises that monitor her thoughts using a diary.
Concurrent with this work and during each session Amy would be introduced to relaxation and
gentle exercise options.

In each of the therapy sessions alternative relaxation therapies would be introduced with
a view to helping Amy find the most suitable for her situation and personality. Relaxation
therapy has been proven in numerous studies in different settings that it is as effective as other
evidence-based interventions (e.g. Hassed, 2000; Reynolds & Coats, 1986). It is important that
Amy is aware that relaxation alone does not take her problems away and does not perform
magic, but simply helps to undo the harmful effects of inappropriate stress, thereby letting the
physiology return to a healthy balance (Hassed, 2000).

Iyengar Yoga would be a recommended form of exercise that would also allow Amy to
engage others in a similar situation with chronic pain, for example. A comprehensive outcome
study by Williams et al. (2005) using Iyengar yoga therapy as a chronic lower back pain
treatment revealed significant reductions in pain intensity (64%), functional disability (77%) and
pain medication usage (88%) in the yoga group at the post and 3-month follow-up assessments.
As this result was for people who were self-referred it would be important to introduce this
therapy to Amy in terms of the benefits others had experienced and hence the potential
opportunities for her. This exercise helps to release muscular tension and build strength so that
the Amy’s physiology can assume a new healthy balance.
A key aspect in helping Amy is to shift her focus from the main problem in her life, namely pain to other issues that when addressed can help to mitigate her pain-focussed problem perspective. Undertaking appropriate housework, social activities, and occupational training are areas that Amy may wish to explore during therapy. By adopting a problem solving framework may help Amy to become more empowered and increase her level of self-efficacy with her situation. Central to this work is that as problems are more manageable a continual focus on fostering self-efficacy beliefs is needed.

There is an element of avoidance in Amy’s pain behaviour presentation and there may also be specific trauma-related avoidance around the mva. The consequences of avoidance for pain sufferers can be significant with muscle wastage, lose of strength, flexibility and endurance. This creates a vicious circle; as the physiological weakness increases more and more activities begin to cause pain. This condition can also have pain effects on other parts of the body unrelated to the original injury that would continue to fuel Amy’s avoidance behaviours. Exposure therapy, tailored to Amy’s present physiological and psychological state, is the evidenced-based treatment for avoidance and would be offered here.

Treatment adherence would need to be monitored as not all clients’ benefit from CBT equally. This is in part because chronic pain sufferers do not represent a homogeneous group. Post treatment assessment using the tests at case formulation would also help to gauge Amy’s uptake of the treatment. Also during the treatment tapering process, relapse management would also need to be included. Additionally, it has been found that the earlier a patient begins rehabilitative CBT treatment the more effective the clinical outcome (Turk & Okifuji, 2002). In this case Amy’s delay in commencing treatment may impact treatment effectiveness. However, research indicates that the single most significant factor that predicts CBT treatment
effectiveness is the willingness and motivation to be treated and undergo change, and that better outcomes also result when CBT is included in a comprehensive program that includes, education, social support, and physical therapy such as yoga (Turk & Okifuji, 2002).

**Family treatment**

*Structured family therapy (SFT) theory*

The theoretical basis of structured family therapy (SFT) relies on the tenets of general systems theory and the related interdependent concept of the whole being greater than the sum of its parts (Wetchler, 2003). Inherent in systems theory is the concepts of open and closed systems, feedback loops, and linear (A causes B) versus reciprocal causality (A’s behaviour is the logical outcome of B’s behaviour and B’s behaviour is the logical outcome of A’s behaviour). There are concepts within systems theory that identify that all systems as composed of boundaries, rules and roles, and an information exchange that enables such tasks as feedback. Therefore, systems theory is the foundation for understanding the majority of family therapies theories including structured family therapy (Minuchin & Fishman, 1981).

*Structured family therapy (SFT) principles and applications*

The treatment of family issues is considered to be a key element in this management plan and SFT is chosen as the preferred intervention for this case. The rationale for SFT lies in the notion that the Amy’s marriage related problems are maintained by dysfunctional family structures rather than individual pathology (Wetchler, 2003). The focus here is not on resolving Amy and her partners’ individual problems but more to work with them to alter the family’s organisational structure. Noting that structure here means the product of an evolved pattern of interacting (Minuchin & Fishman, 1981) that has dysfunctionally evolved since Amy’s mva and subsequent chronic pain suffering. The therapeutic focus is also on the present-centred issues
around her deteriorated relationship rather than the history of the problem. This could involve exploring who has the power, what space exists to assume responsibility, and the level of flexibility that exists for family members to change role in new and different situations (Wetchler, 2003). Also a family therapist’s central tenet is to assess how the family organises itself regarding solving the problem, which in this case would be the family structure adaptation to the effects of Amy’s disability.

A belief in basic competencies of families is fundamental to SFT. Problems do not exist because of core dysfunction in families, but rather because the family is unable to access workable structure to solve the problem (Wetchler, 2003). As all families have the potential to solve problems, it becomes the therapist who must convince Amy’s family to risk searching for alternatives they already possess.

Hierarchies, boundaries, and subsystems are important elements of SFT, and the therapist seeks to break the family down into its various subsystems or groupings of members around specific tasks. For example, Amy and her husband’s subsystem form the spouse subsystem, which may seek to provide mutual support, sex, and companionship, and executive decision-making around the rearing and discipline of their daughter. Boundaries are the rules that govern who is included and excluded from a specific subsystem (Minuchin & Fishman, 1981). It is clear that Amy’s daughter has assumed roles within subsystems in which she had not previously been involved, and may need to be formally recognised in broader subsystem structures.

A focus of therapy here would be to examine the structural changes in terms of boundaries and subsystems. Hierarchy refer to a boundary that distinguishes the leadership subsystem form the rest of the family (Wetchler, 2003), and therapist’s believe that an individual, or a group of members must assume a leadership role to resolve a task. Importantly
no hierarchies are permanent but must often rearrange to meet demands as they arise. For example, the increased role of the daughter to undertake household tasks may be considered to be a normal family response to change. SFT may help Amy reduce anxiety and guilt about her daughter taking a greater role, and also may motivate her husband to become more involved in tasks previously the domain of Amy when she was well. It seems that there is some ground for negotiation that may endorse Amy’s pain and help to motivate her into tasks that may not elicit debilitating pain. This work relates to alliances, coalitions, and triangles in SFT that seek to identify, for example how alliances can be arranged to handle specific problems such as housework tasks in Amy’s home. Coalitions exist when two or more family members join forces against one of more family members that usually occur in disagreements. In SFT coalitions are seen as adversarial and secretive, but may be a productive way for a weaker member to gain support and drive a change. Triangles are a specific coalition in which two family members join forces against a third member, with the most common being a parent and child join forces against the other parent (Wetchler, 2003).

Structured family therapy (SFT) techniques

Unlike the CBT approach that is insight oriented, SFT tends to be action focussed. So this may be a complicating and anxiety-increasing concern for Amy initially which may need to be managed in therapy. Families’ together are often anxious which could possibly be expected with Amy and her family. Their concerns may be around how the therapist will understand them or blame them for their problems. Anxiousness around revealing things about themselves to the therapist may be apparent, and it is important to establish rapport and trust early to combat this natural uncertainty. As an important rapport building process joining, according to Minuchin and Fishman (1981) is where the therapist lets their client families know they understand them and
are working to help them. This process includes making the family feel comfortable, listening to concerns of all members, understanding their opinions and feeling and treating everyone with respect (Wetchler, 2003).

For the therapist it has been found important that they are able to accommodate or adapt their own behaviour to that of the client family. Here the importance of family uniqueness is paramount, which may mean the therapist needs to adjust language, posture, and pace of delivery to match that of the client family. With Amy and her husband seemingly very detached from each other it will be important to work slowly and respectively with them, and learn when to challenge or when to hold back.

The next step for the therapist is the structural diagnosis after having identified the dysfunctional family structure that maintains an individual’s symptoms (Minuchin & Fishman, 1981). This seems very challenging and could be easily derailed. It would seem that care is needed when describing problems to the family who have been unable to describe their problematic structures, particularly in this case with the family power or executive alliance being an important focus. Restructuring the dysfunctional family follows and revolves around the therapist helping the family find a more appropriate structure for solving its problem. It would seem that the family could simply blame Amy (or hold this blame in their thoughts) for all the problems, however it would be important well before restructuring to engage each member on this issue.

Enactment is also a process involved at this time, which involves the family engaging in their problematic behaviours in the therapy room. This could be talking among each other about how to engage in family activities that are consistent with Amy’s pain behaviours.
Treatment planning options

There are inherent risks with SFT as it is technically complex and involves the family on many levels. There will also be a need to learn the therapy and be a competent therapist prior to engaging any family.

Techniques that would be useful adjuncts would be the skilled helper model for re-engaging when and if required, and possibly include individual CBT with Amy and her husband around their thoughts and feelings about the marriage and family functioning. If a conflictual relationship with expressed emotion exists additional challenges for the therapist would exist. Overall CBT, which includes relaxation, and SFT should provide an appropriate clinical treatment combination for the major depressive disorder, rehabilitation for chronic pain management, and a response to Amy and her family’s current family and relationship problems.

Finally, there has been much more empirical research evidence on the efficacy of cognitive-behavioural couple and family treatments than family therapies. As CBT is proposed for Amy’s depression and chronic pain, if the SFT is unsuccessful it is proposed that a switch to the cognitive-behavioural approach be made as much of the psychoeducation around this treatment would be common across each intervention and thus would help Amy to understand more readily treatment intentions.
References


